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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/768,243	01/25/2001	Seiichiro Hangai	CS-04-010125	3564

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PAUL A. GUSS  
PAUL A. GUSS ATTORNEY AT LAW  
775 S 23RD ST FIRST FLOOR SUITE 2  
ARLINGTON, VA 22202

EXAMINER

NALVEN, ANDREW L

ART UNIT PAPER NUMBER

2134

DATE MAILED: 07/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/768,243

Applicant(s)

HANGAI, SEIICHIRO

Examiner

Andrew L. Nalven

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/25/01.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Claims 1-9 are pending.

#### ***Specification***

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

#### ***Claim Objections***

3. Claim 7 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. In this case, multiple dependent claim 7 is dependent upon multiple dependent claim 5. See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits.

#### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim recites the limitation "wherein said threshold is

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*substantially the same* as a maximum value." The use of "substantially the same" provides an unclear basis for the claimed "threshold."

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Crane et al US Patent No. 3,906,444. Crane discloses a special pen and system for handwriting recognition.

8. With regards to claim 1, Crane teaches a direction measuring means for measuring, in a time domain, the direction vector of a pen represented by a tilt angle or direction angle of the pen with respect to the writing surface (Crane, column 3 lines 23-39, column 4 line 58 - column 5 line 17, column 1 lines 37-41), a first vector generating means for generating, in a time domain, a first vector including as a component thereof the direction vector of the pen measured by the direction measuring means when a first entity writes a pre-determined pattern on the writing surface with the pen (Crane, column 4 line 67 – column 5 line 18, Figure 6 "Master" or M vector), a second vector generating means for generating, in a time domain, a second vector including as a

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component thereof the direction vector of the pen measured by the direction measuring means when a second entity writes a pre-determined pattern on the writing surface with the pen (Crane, Figure 6 "Test" or T Vector, column 1 lines 50-59), DP matching means for performing a DP matching process to match time scales of the first and second vectors in order to minimize an accumulated value of differences between the first vector generated by the first vector generating means and the second vector generated by the second vector generating means where the differences include differences between the direction vector included in the first vector and the direction vector included in the second vector (Crane, column 6 lines 12 – 46, column 7 lines 1-7), and decision making means for determining that the first entity and the second entity are identical to each other if the accumulated value of differences between the first vector and the second vector in the DP matching process performed by the DP matching means is equal to or smaller than a predetermined threshold and determining that the first entity and second entity are different if the accumulated value is greater than the predetermined threshold (Crane, column 7 lines 24-30, column 8 lines 31-34).

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. Claim 2-6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crane(1) et al US Patent No. 3,906,444 in view of Crane(2) et al US Patent No. 4,040,010. Crane(2) discloses a identification by handwriting system..

11. With regards to claim 2, Crane(1) teaches all that is described above, but fails to teach a writing pressure measuring means for measuring in a time domain the writing pressure applied to the writing surface by the pen. Crane(2) teaches a writing pressure measuring means for measuring in a time domain the writing pressure applied to the writing surface by the pen (Crane(2), column 3 lines 12-15, column 6 lines 34-41). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize Crane(2)'s method of using and recording pressure measurements with Crane(1)'s handwriting recognition system because it offers the advantage of providing a parameter that characterizes a individual's handwriting and provides the ability for comparison that facilitates identification (Crane(2), column 1 lines 32-37).

12. With regards to claim 3, Crane(1) as modified fails to teach the weighting of the standardized differences such that the former differences are weighted to an extent greater than the latter differences. Crane(2) teaches the weighting of the standardized differences such that the former differences are weighted to an extent greater than the latter differences (Crane(2), column 6 lines 42-64).

13. With regards to claim 4, Crane(1) fails to teach a writing pressure measuring means for measuring in a time domain the writing pressure applied to the writing surface by the pen and the weighting of the standardized differences such that the

former differences are weighted to an extent greater than the latter differences.

Crane(2) teaches a writing pressure measuring means for measuring in a time domain the writing pressure applied to the writing surface by the pen (Crane(2), column 3 lines 12-15, column 6 lines 34-41) and the weighting of the standardized differences such that the former differences are weighted to an extent greater than the latter differences (Crane(2), column 6 lines 42-64). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize Crane(2)'s method of using and recording pressure measurements and Crane(2)'s method of weighting parameters with Crane(1)'s handwriting recognition system because it offers the advantage of providing a parameter that characterizes a individual's handwriting and provides the ability for comparison that facilitates identification (Crane(2), column 1 lines 32-37) and allowing the identification system to focus on parameters that are more effective in separating true from false signatures (Crane(2), column 6 lines 61-64).

14. With regards to claim 5 (as dependent from claims 1-4), Crane(1) fails to teach the generating of a plurality of sets of the first vector when the first entity writes the predetermined pattern on the writing surface a plurality of times. Crane(2) teaches the generating of a plurality of sets of the first vector when the first entity writes the predetermined pattern on the writing surface a plurality of times (Crane(2), column 4 lines 42-49 and 59-61). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize Crane(2)'s method of generating a plurality of first vectors with Crane(1) or Crane(1) as modified because it offers the



advantage of allowing the creation of an average value and standard deviation that can be used to normalize a sample signature to be verified (Crane(2), column 1 lines 38-56).

15. With regards to claim 6 (as best understood), Crane(1) as modified teaches the threshold being substantially the same as a maximum value of the accumulated value of the differences in the DP matching process performed on the plurality of sets of the first vector (Crane(2), column 2 lines 37-46).

16. With regards to claim 8, Crane(1) as modified fails to specifically teach the generating, in a time domain, of a plurality of sets of the second vector when the second entity writes the predetermined pattern on the writing surface a plurality of times, performing the DP matching process on the plurality of sets of the second vector, and generating an average vector of the plurality of sets of the second vector processed by the DP matching process as the new second vector (). However, Crane(1) as modified does teach the same process for generating a first vector by a first entity in that Crane(2) teaches the generating of a plurality of sets of the first vector when the first entity writes the predetermined pattern on the writing surface a plurality of times (Crane(2), column 4 lines 42-49 and 59-61), the performing of a DP matching process on the plurality of sets of the first vector, and generating an average vector of the plurality of sets of the first vector processed by the DP matching process as the new first vector (Crane(2), column 4 lines 50-58). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to apply Crane(2)'s averaging method towards the Crane(1) as modified's second vector because it offers the advantage of providing a more accurate representation of the inputted signature.

**Conclusion**

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
18. Dyche US Patent No. 3,699,517 teaches a handwriting authentication technique.
19. Moussa et al US Patent No. 5,680, 470 teaches a method of automated signature verification.
20. Zank et al US Patent No. 6,307,955 teaches an electronic signature management system.
21. Bishop et al US Patent No. 6,487,310 teaches a signature matching system with an elastic matching method.
22. Black US Patent No. 6,539,101 teaches a method for identity verification by using biometric technology such as signatures.

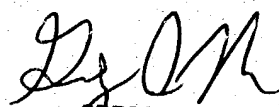
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew L Nalven whose telephone number is 703 305 8407. The examiner can normally be reached on Monday - Thursday 8-6, Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on 703 308 4789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andrew Nalven



GREGORY MORSE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100